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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/802,627	03/17/2004	Igor Rukhman	1662/63303	4926

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EXAMINER

LEE, SUSANNAH E

ART UNIT	PAPER NUMBER
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1626

DATE MAILED: 06/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/802,627

Applicant(s)

RUKHMAN ET AL.

Examiner

Susannah Lee

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— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-85 is/are pending in the application.
- 4a) Of the above claim(s) 1-16 and 18-85 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 17 and 18 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☒ Claim(s) 1-85 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7/21/2004</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claims 1-85 are currently pending in the instant application.

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-2 are drawn to a process of preparing an amorphous form of valsartan comprising the steps of precipitating amorphous valsartan from a solution of valsartan in methyl t-butyl ether and acetone and recovering the amorphous form.
- II. Claims 3 and 4 are drawn to a process of preparing an amorphous form of valsartan comprising the steps of precipitating amorphous valsartan from a solution of valsartan in water and a solvent from the group consisting of ethanol, DMF, acetone, or a mixture therefore and recovering the amorphous form.
- III. Claims 5 to 7 are drawn to a process of preparing an amorphous form of valsartan comprising the steps of preparing a solution of valsartan in a solvent from the group consisting of tetrahydrofuran, dioxane, ethanol, isopropanol, diethyl ether and methanol and removing the solvent.
- IV. Claims 8 to 11 are drawn to a process of preparing an amorphous form of valsartan comprising the steps of suspending valsartan in a solvent from the group consisting of water and C5 to C12 saturated hydrocarbon and recovering the amorphous valsartan.
- V. Claims 12 to 13 are drawn to a process of preparing an amorphous form of valsartan comprising the steps of acidifying a basic aqueous solution of valsartan,

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which results in precipitation of amorphous valsartan and recovering the amorphous valsartan.

- VI. Claim 14 is drawn to a process of preparing an amorphous form of valsartan comprising the steps of heating valsartan in diisopropyl ether to obtain amorphous valsartan and acetone and recovering the amorphous form.
- VII. Claim 15 to 16 are drawn to a process of preparing an amorphous form of valsartan comprising the steps of heating crystalline valsartan, Form III or Form VII, and Form III is prepared by crystallization out of n-butyl acetate.
- VIII. Claims 17-18 are drawn to an amorphous form of valsartan, wherein the amorphous form has a DSC thermogram that lacks a melting point above about 1 J/g.

This list is not exhaustive as it would be impossible under the time constraints due to the sheer volume of subject matter instantly claimed. Therefore, applicant may choose to elect a single invention (a product or a method of use of said product) by identifying another specific embodiment, i.e. another process of making amorphous valsartan or a different form of valsartan, etc..., not listed in the exemplary groups of the invention and examiner will endeavor to group the same.

Rationale Establishing Patentable Distinctiveness Within Each Group

Each Group listed above is directed to or involves the use of compounds which are recognized in the art as being distinct from one another because of their diverse chemical structure, their different chemical properties, modes of action, different effects and reactive conditions (MPEP 806.04, MPEP 808.01). Additionally, the level of skill in the art is not such

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that one invention would be obvious over the other invention (Group), i.e. they are patentable over each other. Chemical structures, which are similar, are presumed to function similarly, whereas chemical structures that are not similar are not presumed to function similarly. The presumption even for similar chemical structures though is not irrebuttable, but may be overcome by scientific reasoning or evidence showing that the structure of the prior art would not have been expected to function as the structure of the claimed invention. Note that in accordance with the holding of Application of Papesch, 50 CCPA 1084, 315 F.2d 381, 137 USPQ 43 (CCPA 1963) and In re Lahu, 223 USPQ 1257 (Fed. Cir. 1984), chemical structures are patentably distinct where the structures are either not structurally similar, or the prior art fails to suggest a function of a claimed compound would have been expected from a similar structure.

The above groups represent general areas wherein the inventions are independent and distinct, each from the other because of the following reasons:

Inventions I and VIII are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) that the process for using the product as claimed can be practiced with another materially different product or (2) that the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case, the product as claimed in Group VIII can be in a materially different process as shown in Claims 1-16 (Groups I-VII).

Inventions I to VII represent separate and distinct processes of making a compound of formula (I). Processes are separate and distinct if they differ with respect to starting materials, reagents, and method steps. In the instant case, Inventions I-VII use different starting materials, reagents and method steps to yield the amorphous valsartan. Since, Inventions I-VII are separate

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and distinct process of making they have different issues regarding patentability and enablement and represent patentably distinct subject matter.

In addition, because of the plethora of classes and subclasses in each of the Inventions, a serious burden is imposed on the examiner to perform a complete search of the defined areas. Therefore, because of the reasons given above, the restriction set forth is proper and not to restrict would impose a serious burden in the examination of this application.

Advisory of Rejoinder

The following is a recitation of M.P.E.P. 821.04, Rejoinder:

Where product and process claims drawn to independent and distinct inventions are presented in the same application, applicant may be called upon under 35 U.S.C. 121 to elect claims to either the product or process. See MPEP § 806.05(f) and § 806.05(h). The claims to the nonelected invention will be withdrawn from further consideration under 37 CFR 1.142. See MPEP § 809.02(c) and § 821 through § 821.03. However, if applicant elects claims directed to the product, and a product claim is subsequently found allowable, withdrawn process claims, which depend from or otherwise include all the limitations of the allowable product claim will be rejoined.

Where the application as originally filed discloses the product and the process for making and/or using the product, and only claims directed to the product are presented for examination, when a product claim is found allowable, applicant may present claims directed to the process of making and/or using the patentable product by way of amendment pursuant to 37 CFR 1.121. In view of the rejoinder procedure, and in order to expedite prosecution, applicants are encouraged to present such process claims, preferably as dependent claims, in the application at an early stage of prosecution. Process claims, which depend from or otherwise include all the limitations of the patentable product will be entered as a matter of right if the amendment is presented prior to final rejection or allowance. Amendments submitted after final rejection are governed by 37 CFR 1.116. Process claims which do not depend from or otherwise include the limitations of the patentable product will be withdrawn from consideration, via an election by original presentation (see MPEP § 821.03). Amendments submitted after allowance are governed by 37 CFR 1.312. Process claims which depend from or otherwise include all the limitations of an allowed product claim and which meet the requirements of 35 U.S.C. 101, 102, 103, and 112 may be entered.

Where product and process claims are presented in a single application and that application qualifies under the transitional restriction practice pursuant to 37 CFR 1.129(b), applicant may either: (A) elect the invention to be searched and examined and pay the fee set forth in 37 CFR 1.17(s) and have the additional inventions searched and examined under 37 CFR 1.129(b)(2); or (B) elect the invention to be searched and examined and not pay the additional fee (37 CFR 1.129(b)(3)). Where no additional fee is paid, if the elected invention is directed to the product and the claims directed to the product are subsequently found patentable, process claims which either depend from or include all the limitations of the allowable product will be rejoined. If applicant chooses to pay the fees to have the additional inventions searched and examined pursuant to 37 CFR 1.129(b)(2) even if the product is found allowable, applicant would not be entitled to a refund of the fees paid under 37 CFR 1.129(b) by arguing that the process claims could have been rejoined. 37 CFR 1.26(a) states that "[T]he Commissioner may refund any fee paid by mistake or in excess of that required. A change of purpose after the payment of a fee...will not entitle a party to a refund of such fee..." In this case, the fees paid under 37 CFR 1.129(b) were not paid by mistake nor paid in excess, therefore, applicant would not be entitled to a refund. In the event of rejoinder, the

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rejoined process claims will be fully examined for patentability in accordance with 37 CFR 1.104. Thus, to be allowable, the rejoined claims must meet all criteria for patentability including the requirements of 35 U.S.C. 101, 102, 103, and 112. If the application containing the rejoined claims is not in condition for allowance, the subsequent Office action may be made final, or, if the application was already under final rejection, the next Office action may be an advisory action. Form paragraphs 8.42 through 8.44 should be used to notify applicant of the rejoinder of process claims which depend from or otherwise include all the limitations of an allowable product claim.

In the event of rejoinder, the rejoined process claims will be fully examined for patentability in accordance with 37 CFR 1.104 - 1.106. Thus, to be allowable, the rejoined claims must meet all criteria for patentability including the requirements of 35 U.S.C. 101, 102, 103, and 112. If the application containing the rejoined claims is not in condition for allowance, the subsequent Office action may be made final, or, if the application was already under final rejection, the next Office action may be an advisory action.

The following is a recitation from paragraph five, "Guidance on Treatment of Product and Process Claims in light of *In re Ochiai*, *In re Brouwer* and 35 U.S.C. §103(b)" (1184 TMOG 86(March 26, 1996)):

"However, in the case of an elected product claim, rejoinder will be permitted when a product claim is found allowable and the withdrawn process claim **depends from or otherwise includes all the limitations** of an allowed product claim. Withdrawn process claims not commensurate in scope with an allowed product claim will not be rejoined." (emphasis added)

Therefore, in accordance with M.P.E.P. 821.04 and *In re Ochiai*, 71 F.3d 1565, 37 USPQ 1127 (Fed. Cir. 1995), rejoinder of product claims with process claims commensurate in scope with the allowed product claims will occur following a finding that the product claims are allowable. Until, such time, a restriction between product claims and process claims is deemed proper. Additionally, in order to retain the right to rejoinder in accordance with the above policy, Applicant is advised that the process claims should be amended during prosecution to maintain either dependency on the product claims or to otherwise include the limitations of the product claims. **Failure to do so may result in a loss of the right to rejoinder.**

During a telephone conversation with Attorney Payam Moradian on 5/24/2005 a provisional election was made *with traverse* to prosecute the invention of Group VIII, comprising Claims 17-18 of an amorphous form of valsartan, wherein the amorphous form has a DSC thermogram that lacks a melting point above about 1 J/g and wherein the melting point is

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lacking in the region of from about 80°C to about 100°C. Affirmation of this election must be made by applicant in replying to this Office action.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buhlmayer et al., U.S. Pat. Num. 5,399,578.

Claims 17-18 of Applicant's instant elected invention teaches an amorphous form of valsartan, wherein the amorphous form has a DSC thermogram that lacks a melting point above about 1 J/g and wherein the melting point is lacking in the region of from about 80°C to about 100°C.

Determination of the scope and content of the prior art (MPEP § 2141.01)

Buhlmayer teaches the amorphous form of valsartan. (See U.S. Pat. Num. 5,399,578, Claims 1-4). Buhlmayer also teaches several melting intervals of valsartan: (1) 105°C -115°C

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from ethyl acetate ('578 Patent Example 16, Column 34, Line 62 and Instant application, page 3, lines 6-7).

Ascertainment of the difference between the prior art and the claims (MPEP § 2141.02)

The difference between the prior art of Buhlmayer and the instant claims is that the prior art is silent as to the DSC thermogram, but it does teach that the melting point of amorphous valsartan is not in the region of about 80°C to about 100°C.

Finding of prima facie obviousness – rationale and motivation (MPEP § 2142-2413)

One skilled in the art would have found the claimed compound prima facie obvious because the instantly claimed compound and the compound in Buhlmayer are the same compounds, i.e. amorphous valsartan. Buhlmayer does not claim the DSC thermogram of amorphous valsartan. The absence of the DSC thermogram data does not necessarily mean that the DSC thermogram of amorphous valsartan is different. One skilled in the art may assume that since the compounds are the same and the melting interval of the valsartan in Buhlmayer meets the criteria in Claim 18 of the instant application one skilled in the art would expect them to also share the same properties.

The DSC thermogram and melting points are highly dependent on the purity of the compound, type of solvent used and various other factors, as illustrated in Buhlmayer. For example, the melting interval of valsartan from ethyl acetate is 105°C-115°C (Column 34, line 62), while the valsartan from ethyl acetate in crystalline form has a melting interval of 105°C-1150°C (Column 49, line 52). In addition, different conditions such as concentration and temperature product different forms of valsartan that affect the melting interval. For example, the melting interval of a colourless crystal form of valsartan from ethyl acetate is 134°C-136°C

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(Column 58, line 11) and the melting interval of light brown crystals of valsartan from ethyl acetate and diethyl ether is 189°C-190°C (Column 58, line 43). It is well established that change in temperature, concentration, or both is not a patentable modification in the absence of unexpected results which is different in kind and not degree. In re Aller, 105 USPQ 233. In addition, discovery of an optimum value of a result effective variable is not patentable if such discovery is within skill in the art. A prima facie case of obviousness may be rebutted in optimizing a variable only when results are unexpectedly good. In re Boesch, 205 USPQ 215. Therefore, the claimed compounds are obvious in light of the prior art unless applicant can show that the difference in the DSC thermogram of the amorphous valsartan dramatically change the utility of the compound.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 17-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Regarding claim 17, the phrase "above about" renders the claim indefinite because it is unclear what the scope of the claim is, for example is it 2 J/g, 5 J/g, 12 J/g, etc..., thereby rendering the scope of the claim unascertainable. Regarding Claim 18, the phrase "about" renders the claim indefinite because it is unclear what the scope of the claim is, for example is the melting point below 80°C or is it above 100°C, does the melting temperature include 80°C and 100°C, etc..., thereby rendering the scope of the claim unascertainable.

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Telephone Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susannah Lee whose telephone number is (571) 272-6098. The examiner can normally be reached on M-F, 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph McKane can be reached on (571) 272-0699. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Susannah Lee
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Date: 06/09/05